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(54) Title: LIGHT-TRANSMITTING AND/OR COATED ARTICLE WITH REMOVABLE PROTECTIVE COATING AND METHODS OF MAKING THE SAME

(57) Abstract: A method and coating are provided for temporarily protecting a substrate or article during shipping, handling or storage by applying a removable protective coating over at least a portion of the substrate. The substrate may be flat or curved and may have zero, one or more functional coatings. A plurality of substrates with the protective coating of the invention may be arranged in a shipping container so that the protective coating reduces the possibility of damage to the substrate or optional functional coating. In one embodiment, the protective coating is the evaporation or reaction product of an aqueous coating composition containing a polyvinyl alcohol polymer which may be subsequently removed by aqueous washing, thermal decomposition or combustion. In another embodiment, the protective coating is formed by sputtering a substantially carbon coating onto the substrate. The carbon coating is subsequently removed by combustion. The protective coating may have identification materials, such as colorants or fragrance materials, such that different types of substrates and/or functional coatings can be distinguished from each other. Additionally, the temporary protective coating can improve the heating of a functionally coated glass substrate.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/17326

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C09D5/00 C03C17/32 C03C17/38 C03C17/42 B65G49/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09D C03C B65G B05D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 209 292 A (GENERAL ELECTRIC COMPANY) 10 May 1989 (1989-05-10) abstract page 10, line 21 -page 11, line 5; claims 1-7 ---	1-4,7,9, 11,12, 20,21, 27,29,32
X	GB 2 145 640 A (U C B S A) 3 April 1985 (1985-04-03) abstract page 1, line 48-50 page 3, line 24 --- -/--	1,3,6-8, 13, 19-21, 27,29

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

6 October 2000

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INTERNATIONAL SEARCH REPORT

International Application No

PC US 00/17326

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>FR 2 543 514 A (PPG INDUSTRIES INC.) 5 October 1984 (1984-10-05)</p> <p>claims & US 5 026 597 A 25 June 1991 (1991-06-25) cited in the application -----</p>	<p>1,3-8, 14-18, 29-31</p>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/17326

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-25, 27-32

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-25, 27-32

Coated article comprising a substrate, a functional coating deposited thereon and a removable protective coating on top thereof; method for making said article and coating composition for use in the removable coating.

2. Claims: 26, 62, 63

Coated article comprising a flat glass substrate and a removable protective coating deposited thereon having a thickness of less than 50 microns; method of making.

3. Claims: 35-51

Coated article comprising a substrate and a removable carbon protective coating deposited thereon; method of making.

4. Claims: 33-34

Method of identifying selected substrates by forming removable protective coatings of different appearance or smell on different substrates.

5. Claims: 52-61

Method of preparing a shipping container having a plurality of adjacent sheet substrates and manufacture of articles therefrom.

6. Claims: 64-68

Method of promoting uniform heating of a substrate having a functional coating by using a removable high emissivity coating.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PC., JS 00/17326

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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